WHAT IS CLAIMED IS:

1. An electrical assembly comprising:

traces extending toward respective off-assembly connections; and

integrated transformer structures defined along the traces to induce compensating crosstalk signals having opposing polarity to initial crosstalk signals associated with mutual coupling between adjacent of the off-assembly connections.

2. The electrical assembly of claim 1, wherein one or more of the integrated transformer structures each comprise:

an aperture in a voltage plane of the electrical assembly;

essentially parallel portions of corresponding pairs of the traces, the essentially parallel portions passing over the aperture.

3. The electrical assembly of claim 1, wherein one or more of the integrated transformer structures each comprise:

an aperture in a voltage plane of the electrical assembly; and

essentially parallel portions of corresponding pairs of the traces, the essentially parallel portions coplanar with the voltage plane and traversing the aperture therein.

4. The electrical assembly of claim 1, further comprising:

the off-assembly connections.

5. The electrical assembly of claim 1, including a semiconductor package, wherein the off-assembly connections include pins, solder connections, leads, or wires; and

wherein the traces are formed on the semiconductor package.

6. The electrical assembly of claim 1, including a board or card, wherein the off-assembly connections include pins or leads of a semiconductor package or solder connections or wires thereto; and

wherein the traces are formed on the board or card.

7. The electrical assembly of claim 1, including a board or card,
wherein the off-assembly connections include pins, leads, solder connections or edge connectors; and
wherein the traces are formed on the board or card.

8. The electrical assembly of claim 1, including a semiconductor package,
wherein the off-assembly connections include pins, solder connections, leads, or wires.

9. The electrical assembly of claim 1,
wherein the traces and the off-assembly connections are on opposing sides of the electrical assembly; and
wherein an electrical connection between a trace and a respective off-assembly connection includes a plated through hole or conductive via.

10. The electrical assembly of claim 1,
wherein the off-assembly connections are organized as an array thereof; and
wherein, for each of the traces, one or more of the integrated transformer structures are defined therealong to induce respective of the compensating crosstalk signals and thereby oppose respective of the initial crosstalk signals introduced at a corresponding one of the off-assembly connections by nearest neighbors thereof.

11. The electrical assembly of claim 10,
wherein the array includes a linear array;
wherein the nearest neighbors number two; and
wherein, for essentially each of the traces, two of the integrated transformer structures are defined therealong to induce respective of the compensating crosstalk signals and thereby oppose respective of the initial crosstalk signals introduced by the nearest neighbors.

~~12. The electrical assembly of claim 1,~~

wherein the off-assembly connections include one of pins, solder joints, leads, and wires.

13. The electrical assembly of claim 1, wherein the electrical assembly includes an integrated circuit chip.

14. The electrical assembly of claim 1, wherein the electrical assembly includes a chip carrier or package.

15. The electrical assembly of claim 1, wherein the electrical assembly includes a board or card.

16. A crosstalk compensation circuit for offsetting an original crosstalk signal induced at a first off-assembly connection by one or more signals on one or more adjacent off-assembly connections, the crosstalk compensation circuit comprising:

electrical traces respectively coupled to the first and adjacent connections; and

the electrical traces traversing apertures defined in one or more voltage planes of the assembly to inductively couple compensating crosstalk signals having opposing polarity to the original crosstalk signal.

17. The crosstalk compensation circuit of claim 16,

wherein the assembly includes a semiconductor package; and

wherein the first and adjacent connections are to a board or card.

18. The crosstalk compensation circuit of claim 16,

wherein the assembly includes a semiconductor package; and

wherein the first and adjacent connections are to an integrated circuit chip.

19. A method of making a circuit for canceling crosstalk introduced at a first electrical connection to a packaged integrated circuit by signals on an adjacent one or more electrical connections thereto, the method comprising:

defining a first signal trace from the first electrical connection and respective one or more second signal traces from the adjacent one or more electrical connections; and

defining one or more transformer structures, the transformer structures inductively coupling respective of the one or more second signal traces to the first signal trace, the transformer structures matched to induce signals substantially canceling the crosstalk introduced at the first electrical connection.

20. A method as in claim 19,
wherein the first signal trace, the second signal traces and the transformer structures are defined as part of the packaged integrated circuit.

21. A method as in claim 19,
wherein the first signal trace, the second signal traces and the transformer structures are defined as part of a board or card to which the packaged integrated circuit is connectable using the first and adjacent electrical connections.

22. A method as in claim 19, wherein for each transformer structure, the defining includes:
defining an aperture in a voltage plane of the integrated circuit chip; and
orienting the first signal trace and one of the second signal traces to define substantially parallel portions thereof traversing at least a portion of the aperture.